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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/631,879	07/31/2003	Bertrand Vaysse	IR-2322 (2-3564)	1807

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EXAMINER

DATSKOVSKIY, MICHAEL V

ART UNIT PAPER NUMBER

2835

DATE MAILED: 06/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.



## Office Action Summary

**Application No.**

10/631,879

**Applicant(s)**

VAYSSE ET AL.

**Examiner**

Michael V. Datskovskiy

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |



## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Shinohara.

Shinohara teaches a power module, Fig. 5, comprising: a first and a second lead frames 2 each having an integral conducting pad 3 and an external lead; a first and a second power devices 1 each disposed on a respective conducting pad 3 of a respective lead frame 2; and a first and a second heat sinks 5 each in thermal contact with respective conducting pad 3, wherein said heat sinks 5 are electrically isolated from each other and disposed in a common frame created by an encapsulation 6. Shinohara teaches furthermore said power devices form a half bridge circuit, includes N-channel and P-channel IGBTs each having a source electrode 8 electrically connected to a common conductive node 4.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:



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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shinohara.

Shinohara teaches all the limitations of the claims except said first and said second power devices are arranged to form a half bridge circuit (claim 6); and said power devices are power MOSFETs each having its electrode connected electrically to said conducting pad (claim 7); N-channel power MOSFETs having its electrode drain connected electrically to said conducting pa (claim 8); N-channel MOSFETs having its source electrode connected electrically to said conducting pa (claim 9); said first power device is a P-channel MOSFET and said second power devices is an N-channel MOSFET (claim 10); and said power module further comprising a common conductive node, wherein each MOSFET includes a source electrode electrically connected to said common conductive node (claim 11). Generally, Shinohara teaches IGBTs instead of MOSFETs. In paraprgraph [0029] of the instant application applicant stated that "the present invention is not limited to power MOSFETs, but may include bipolar transistors, IGBTs, or any other power device". Therefore, it would have been obvious matter of design choice to employ MOSFETs in the device by Shinohara, based on the applicant's statement above, and it appears that the device by Shinohara would perform equally well with any kind of heat generating electronic power devices.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Hayashi et al (US Patent 6,791,167); Yoshihara et al (US Patent




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Application Publication 2003/0075783A1); Leon et al (US Patent 6,432,750) and Imhoff (International Application WO 97/27626), each of them being applicable for the rejection of the at least claim 1 of the instant application.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael V. Datskovskiy whose telephone number is (571) 272-2040. The examiner can normally be reached on 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached on (571) 272-2092. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael V Datskovskiy  
Primary Examiner  
Art Unit 2835

06/03/2005